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FORCE PROTECTION OF SEA BASED LOGISTICS. A HISTORICAL
PERSPECTIVE

By

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A paper submitted to the Faculty of the Naval War College in partial satisfaction of the requirements of the Department of Joint Military Operations

The contents of this paper reflect my own personal views and are not necessarily endorsed by the Naval War College or the Department of the Navy

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Abstract of

FORCE PROTECTION OF SEA BASED LOGISTICS,

A HISTORICAL PERSPECTIVE

The United States is heavily reliant on sea based logistics shipping. Much of the United States military strategy involves using military supplies transported on CONUS based ships and prepositioned ships. This dependence on sea based logistics gives the U.S. great flexibility and mobility but is also a critical vulnerability.

During World War II Japan was also a nation dependent on maritime shipping. Japan did not provide force protection for merchant shipping and the results were disastrous. Great Britain and the United States also experienced attacks on maritime shipping in both World War I and II. German submarines destroyed millions of tons of shipping before adequate resources were allocated and tactics developed to counter the threat. Today's operational commander should not forget the lessons of the past. Surprise, unity of effort/unity of command and coordinated air, surface and subsurface efforts are just as relevant today as they were in World War I and II.

The United States has doctrine to protect maritime shipping but U.S. Naval force reductions and the lack of a credible threat make force protection a low priority issue. All maritime shipping is potentially at risk, but prepositioned ships loaded with critical military supplies are especially vulnerable. They are a high value, low risk target for a capable enemy. The results of such an attack could have severe consequences for United States forces and our ability to conduct military operations.

INTRODUCTION

The United States is an island nation. Maritime shipping is the most cost effective method of transport and therefore, the method of choice for moving military equipment and supplies overseas. Because maritime shipping is relatively slow, the United States has prepositioned military supplies on land and afloat, in regions of the world where those supplies would likely be needed. This program is currently being expanded with more ships being added to the maritime prepositioning and fast sealift programs.

The Department of Defense also has elaborate plans to move follow-on forces and equipment to any theater of the world, with the vast majority of supplies being moved on ships. This reliance on maritime shipping and maritime prepositioned supplies may be the "Achilles' heel" of the United States. A determined enemy capable of interdicting maritime shipping and maritime prepositioned shipping could have a devastating impact on the ability of the United States to conduct military operations. The United States and the Department of Defense need to seriously address the issue of force protection for these maritime shipping assets. I contend there is no comprehensive United States policy regarding this issue.

Lessons can be learned from looking at historical case studies: Japan, Great Britain and the United States. Japan's case study is a lesson on force protection applied "too little too late" and the disastrous results that followed. The study of Great Britain and the United States is a lesson of effective maritime force protection that was implemented during both World War I and II.

There are valuable lessons to be learned from these case studies. Today's operational commanders should apply the applicable lessons learned so history is not repeated.

JAPAN IN WORLD WAR II

Japan entered World War II with the third largest merchant marine fleet in the world. They had 2,146 ships of approximately 6 million gross tons.¹ During the war, the Japanese merchant marine added 800,000 tons of captured shipping and 3.3 million tons of new construction.² By the end of World War II, Japanese cargo tonnage was down to less than 2 million gross tons. What happened?

Japan, as an island nation, was dependent on seaborne imports of raw materials and food. When the Japanese expansionist campaign in China resulted in an oil embargo, the military government saw no choice but to secure the natural resources in their region. This led to the attack on Pearl Harbor and the invasion of the Dutch East Indies with their vast petroleum reserves. These actions also resulted in the occupation of most of Southeast Asia. This area of occupation was called the "Greater East Asian Co-Prosperity Zone." Paul Kemp noted, "It is therefore ironic that, having gone to war in order to secure their mineral resources, the Japanese gave little thought to how their safe transport back to Japan could best be assured."³

Japan failed to develop a comprehensive maritime trade defense for several reasons. One was the belief that a large, fleet-to-fleet, Mahanian type battle would decide the fate of the war. Japanese naval doctrine concentrated on this large sea battle and not on defensive operations. Captain Atsushi Oi, a Japanese Naval Officer wrote:

Compared with the Europeans, the Japanese are generally said to be more impetuous and less tenacious. They prefer colourful and offensive fighting to monotonous and defensive warfare. It was only natural that convoy escorting and A/S [anti-submarine] warfare were not jobs welcomed by Japanese naval men.⁴

Another factor was the belief that military control of the Greater East Asian Co-Prosperity Zone would guarantee security in the zone. The Japanese did not believe that United States forces could effectively penetrate this zone. A third factor was the belief that the United States would employ its submarine forces the same way the Japanese would employ them. The Japanese Navy believed submarines should support the main battle fleet. They could not envision submarines being used for maritime interdiction missions.⁵

This doctrine and naval mindset had disastrous consequences for Japan. "The Japanese had refused to consider anti-submarine warfare (ASW) in their pre-war plans and as a result had to make due with vessels relegated from other duties and crewed by officers and men considered not fit to serve with the Combined Fleet."⁶ On December 7, 1941, the U.S. Navy CNO (Admiral Stark) gave the order: "execute unrestricted air and submarine attack against Japan." "At that time the Japanese navy assigned only 12 old and poorly equipped destroyers, 100 torpedo boats, some subchaser and small air units, and 210 converted merchant vessels to protect all Japanese shipping throughout the vast empire."⁷ For the most part, Japanese merchant ships sailed unarmed and unescorted for the first two years of the war. Even as late as 1944, Japan had only about 10 percent of the required anti-submarine forces.

By November 1943, the United States unrestricted submarine effort was beginning to take a toll on Japanese shipping. In response, the Japanese formed the General Escort Command. An admiral brought out of retirement headed this command.

His staff officers were generally considered unfit for other appointments or were reservists. The command consisted of naval districts, where each commander was responsible for shipping in his district. Coordination between districts was poor and information on ship departures and arrivals, enemy submarine sightings and other pertinent information was not passed to adjoining districts. This resulted in poor utilization of already scarce ASW assets. The value of air cover for shipping was recognized, but again the main fleet was the priority and air assets were concentrated to support fleet actions. Finally, in March 1944, the Japanese instituted what they called "a large convoy system." These convoys consisted of ten to twenty ships and were fairly effective in countering the submarine threat. Independent ships were sunk at about two and a half times the rate of convoyed ships.⁸ Also, the United States lost more submarines to convoy escorts than to patrols, mines, aircraft, or any other single cause.⁹ Another consequence of inadequate ship protection resulted when merchant turnaround time increased in port as they waited for convoy escorts. In some cases delays lasted weeks and desperately needed cargo wasted on the docks or in holds. In one case, thirty-two merchantmen remained at Palau for more than three months awaiting the arrival of their one allotted escort vessel.¹⁰

In early 1944, the U. S. submarine and air forces joined in a concerted effort to target Japanese tankers. This was recognized as a critical vulnerability and the U.S. effort devastated the Japanese economy and war effort. By this time the Combined Fleet, the Air Arm and industry were all suffering from a shortage of petroleum products. Tanker construction took up one-third of Japanese shipbuilding capacity and the Combined Fleet moved to Singapore to be nearer petroleum supplies.¹¹ By the time the

battleship *Yamato* sailed to Okinawa in 1945 sailors were reduced to emptying fuel bunkers with buckets to give her enough fuel for a one way journey.¹²

In summary, the Japanese Navy did not allocate adequate resources for maritime shipping protection and the results were disastrous. Kemp summed up the failure of the Japanese:

The primary reason for the failure of Japan's convoy system to protect her shipping lay in her failure to provide adequate air and surface escort and in her total failure to exploit her shore-based aircraft. There was also a failure to organize and operate her aircraft and surface vessels efficiently, to operate her convoys on a cycle consonant with their escort availability and to provide forces in sufficient number and efficiency to be effective fighting components of the convoys they escorted....¹³

The Japanese failure, however, included more than the problems mentioned above. It was a failure at the operational and strategic levels of leadership. The military and the government did a poor job of implementing change to address Japan's critical vulnerabilities. Japan did an even poorer job of estimating the United State's intent, resolve and capability to destroy Japan's maritime shipping.

GREAT BRITAIN AND MARITIME SHIPPING IN WORLD WAR I

As World War I dragged on, the German High Command realized the land war could not be won without mitigating the effects of the British sea blockade. They consequently initiated three different restricted and unrestricted submarine warfare campaigns between 1915 and 1917. The Germans also used surface raiders during these campaigns but their successes were minimal.¹⁴ The British Admiralty was slow to grasp the operational and strategic implications of these campaigns. The British Navy's doctrine was Mahanian in nature. Her naval history had been one of large fleets and decisive engagements and that mindset permeated the Navy. Consequently, the Navy was slow to develop defensive strategies and instead, concentrated on offensive ASW

operations.

While the British Navy was struggling to develop new ASW capabilities and tactics, merchant shipping losses reached alarming rates. France and Italy were dependent on Great Britain for a large percentage of war supplies and food. In turn, Great Britain was dependent on imports of food, war supplies and raw materials from the United States and other countries. Shipping losses in 1915 totaled 790,000 gross tons and in 1916 losses totaled 718,000 gross tons.¹⁵ Although considerable, this lost shipping could be replaced by British industry. The shipping lost in 1917 was a different story. The Germans destroyed merchant shipping totaling 3,900,000 gross tons. In 1916, a total of 1,149 ships entered British ports during February and March. A year later, fewer than 300 ships arrived during those same two months.¹⁶ The chances of a vessel safely completing a voyage from the British Isles to a port beyond Gibraltar was only one in four.¹⁷ In addition to sinking ships, German strategy included the goal of terrorizing neutral shipping. As ship losses continued to mount, British, Allied and neutral ports were filled with neutral ships whose owners ordered them not to sail. This resulted in a general paralysis of neutral shipping. The British responded with measures of their own. They detained all neutral vessels in British ports and allowed them to sail only if they received assurances that would not divert to a neutral port. They also instituted a "ship-for-ship" policy in which vessels were allowed to sail only on the arrival in a British port of a similar vessel of the same flag.¹⁸

Meanwhile, the British Admiralty was having limited success countering the German U-boat threat. The primary tactic developed was offensive in nature, submarine-hunting patrols. Offensive ASW weapon systems, such as depth charges, were

continually developed and refined throughout the war. Defensive systems such as mines and submarine nets were also employed. None of these countermeasures proved particularly effective.

The British Navy considered escort or convoy duty defensive in nature and continued to reject it as an option as late as January 1917. "Many naval officers were loath to employ warships merely to convoy trade when, in their opinion, their proper function was offensive, that is, attacking and combating enemy warships."¹⁹ The merchant marine was also opposed to convoy. Most experienced seamen believed their chances were better if they sailed alone or in pairs, not in convoy.

The British Admiralty reluctantly agreed to begin limited convoy experiments in April 1917 in response to pressure from British politicians. The convoys began with great skepticism but they soon proved to be effective. By July 1917, merchant shipping losses showed a steady decline. Sinkings were declining, and the convoy system was responsible. In 1918 ship losses continued to decline while German U-boat losses remained constant. U-boats changed their tactics after introduction of the ocean convoy system. They moved to inshore waters and preyed on unescorted ships. The loss rate for ships sailing independently in coastal waters was estimated to be ten times that of ships in convoy by late 1917.²⁰ Airplanes and balloons were used to deter coastal attacks, and this in turn, forced the U-boats to develop alternative tactics, such as night attack.

Convoys did not solve all shipping issues. There were numerous operational problems with the convoy system, but it was clear that the convoy system had saved Great Britain from capitulation. The German Navy never succeeded in developing tactics to counter the convoy system. Kemp writes:

Thus the Germans lost the initiative—and the battle. Convoy provided the British with all these cardinal principles of war: offensive action, security, concentration of force, economy of effort, flexibility, interarm co-operation and an improvement in the morale of the men in the ships being convoyed. The introduction of convoy thus gave Britain a low-key but war-winning victory.”²¹

GREAT BRITAIN, THE UNITED STATES AND WORLD WAR II

Great Britain learned her World War I lessons about anti-submarine warfare and convoy, and applied those lessons when war broke out with Germany. When the United States entered the war against Germany in December 1941, the U.S. Navy refused to implement British lessons learned, and instead concentrated on offensive anti-submarine operations (much like the British Navy had done in World War I).

The German war strategy was to sink more cargo vessels than the Allies could produce. Admiral Donitz of the German Navy wrote, “the strategic task of the German Navy was to wage war on trade; its objective was therefore to sink as many enemy merchant ships as it could. The sinking of ships was the only thing that mattered.”²²

British and Canadian warships provided the majority of Atlantic convoy escorts. The United States provided some warships to the Atlantic effort while United States coastal shipping and shipping in the Caribbean went unprotected. German submarines seized on the opportunity to interdict this shipping. Baer writes:

In the first six months of 1942, the United States endured “the greatest maritime massacre of history.” Some 2.34 million tons of shipping capacity was sunk in the western hemisphere, most of it along the eastern and Gulf coasts of the United States...Historians have compared to Pearl Harbor the enormous losses of merchantmen along the eastern sea frontier and in the Caribbean, the lack of U.S. preparedness to meet the threat, and the length of time it took the United States to defeat the perpetrator.²³

The U.S. Navy understood the importance of convoys, but believed a convoy must be strongly defended by its escorts. The U.S. Navy did not have enough escorts to do

Atlantic convoy duty and coastal escort, so coastal merchants did without. The British tried to convince the U.S. Navy that a convoy with smaller, weaker escorts could be an effective defensive strategy but the U.S. Admiralty refused to accept this concept. Instead, the U.S. Navy adopted a strategy of attrition, whereby ships and escorts could be built faster than they could be sunk. That strategy began to change in April 1942 with pressure from the U.S. Army (whose supplies were being sunk at record rates). A partial convoy system was instituted whereby convoys were lightly escorted. This change in shipping practices forced German submarines to operate in the Caribbean where merchants were still unescorted. In May 1942 the Germans sank 108 ships.²⁴ In response, the Navy instituted convoy systems on the entire east coast, in the Caribbean and coordinated movements with the transatlantic convoys. The U.S. also instituted ASW air patrols, which made the east coast and Caribbean a dangerous place for submarine operations. The Germans were forced to move their U-boat offensive back to the Atlantic.

By March 1943, the Germans were again having great success against shipping in the Atlantic, especially in the mid-Atlantic where the Allies lacked air cover. The U-boats hunted in wolf packs of three or more and devised innovative and successful methods of attack. More U-boats were being built than sunk and the submarines could cover larger areas. The situation in Britain was critical. The British War Cabinet was told, "We are consuming 75 percent more goods than we are importing. In two months, we will not meet our requirements if this continues."²⁵ Later that month, the convoys began to receive air cover from long range B-17 and B-24 bombers. United States escort carriers also began escorting convoys. The results were dramatic, during May 1943 the

Germans lost 41 U-boats and Allied shipping losses were the lowest they had been since May of 1941.²⁶

Again, as in World War I, the Germans had lost the initiative. The Allies ability to wage anti-submarine warfare reached critical mass. Escort carriers and long range bomber aircraft proved especially effective. The U.S. ship building program, intelligence efforts and development of convoy doctrine all worked together. However, the German U-boat campaign had cost the Allies 2,603 ships totaling 13.5 million gross tons.

U.S. RELIANCE ON MARTIME SHIPPING IN THE 21st CENTURY

Operation Desert Shield-Desert Storm is used as the benchmark for examining future maritime shipping operations. This operation, “was the largest, most concentrated military lift operation since World War II. More was lifted in the first three weeks of Desert Shield than in the first three months of Korea, which was also an emergency, invasion scenario.”²⁷ Approximately 95 percent of all cargo transported to support the operation went by sea. The sealift operation was divided into three phases: afloat prepositioning, surge shipping and sustainment. The afloat prepositioned shipping accounted for 8 percent of total cargo delivered. Seven fast sealift ships delivered over 9 percent of total cargo. U.S. short-term charters carried 34 percent of total cargo and the rest was moved with ready reserve ships or long term charters.²⁸

Following Desert Storm, the United States Congress commissioned a “Mobility Requirements Study” to examine transportation shortfalls. This study recognized the United State’s inherent weakness in sealift capability and recommended an increased number of maritime prepositioned assets and fast sealift ships. Congress agreed and funded additional ships. Currently the United States has 32 prepositioned ships (33 are

projected) strategically located with military equipment for all four branches of service. By 2001, nineteen large, medium speed, roll-on/roll-off ships (LSMRs) will be completed. These LSMRs are specifically designed to carry cargo during "surge" operations.

As U.S. military forces rely more on maritime prepositioned supplies, doctrine is also changing. The U.S. Marine Corps is developing doctrine whereby the prepositioned ships accompany the MAGTF, eliminating the need for port facilities or host nation support.²⁹ The Army will use prepositioned ships to equip a heavy combat brigade and 11 of the LSMRs will be used for initial surge movement of a heavy division from CONUS. The flexibility and mobility of maritime prepositioning and sealift are obvious, but one important tenant of the maritime shipping concept is often overlooked or left out—force protection for the ships.

CURRENT MARITIME SHIPPING FORCE PROTECTION DOCTRINE

The United States Transportation Command (USTRANSCOM) has the mission of providing air, land, and sea transportation for the Department of Defense, both in time of peace and time of war. The Military Sealift Command (MSC) is the maritime leg of the transportation triad. It is a U.S. Navy command under operational control of USTRANSCOM. Although tasked to provide maritime shipping assets, MSC has no force protection assets and must rely on the geographic CINC and his warfighting assets for protection.

Current United States Joint Doctrine (Joint Pub 4-01.2)³⁰ states:

...during a crisis or conflict, unprotected merchant ships are faced with the extreme risk of loss of ship, cargo, and personnel while operating in any area where a credible military threat exists. Therefore, military forces must be assigned either to eliminate the threat...or provide direct protection...Navy component commanders are tasked

with establishing and implementing plans to provide surface and air escort for the protection of merchant shipping.

Joint Pub 4-01.2 also states, "Other offensive actions that eliminate threats to sealift shipping also may eliminate the need for naval escort and be a more efficient use of resources. These actions may involve the use of air, land, or naval power, as appropriate."

The U.S. Navy further promulgates doctrine in Naval Warfare Publication 3-07.12 (Navy Control and Protection of Shipping).³¹ This publication states:

Use of naval surface, subsurface, or air units to protect shipping can be viewed from two perspectives: whether such units are employed in the protection role as a priority or collateral mission, and whether that employment is directly or indirectly linked to the location of the protected vessel...Naval force operations can be directly centered on protecting a specific vessel ...Alternatively, protection efforts can be focused on establishing safe areas for shipping passage where potential threats have been deterred or eliminated...

This doctrine gives the Naval Component Commander wide latitude to protect shipping, directly or indirectly, offensively or defensively, or by protecting a given sea lane of communication (SLOC).

HOW LESSONS LEARNED FROM THE PAST APPLY TO FUTURE OPERATIONS

What lessons can be learned from the historical case studies of Japan, Great Britain and the United States? Japan, a nation dependent on maritime shipping, did not adequately prepare force protection measures for that shipping. Her navy was focused on offensive operations and did not expect the United States to conduct unrestricted warfare on merchant shipping. Japan was caught by surprise. Once Japan determined that merchant shipping was a critical vulnerability, resources were applied "too little too late". Another lesson learned from Japan is the unity of command/unity of effort issue. Force protection was not a priority, consequently each naval district commander operated

autonomously. This resulted in poor communication between districts and poor utilization of scarce force protection assets.

Great Britain ultimately prevailed in World War I but lessons learned here are valuable as well. Royal Navy tactics and structure were Mahanian in nature, that is, looking for the large fleet engagement. The navy was ill equipped and had no experience countering the U-boat threat. Initially, the navy concentrated on offensive operations to counter the U-boat. Also, the Royal Navy and merchant seamen were institutionally opposed to the defensive concept of convoy. It was only instituted as a last resort with pressure from British politicians. The employment of convoys saved Great Britain from capitulating to the Germans in World War I.

The lessons learned from the United States experience in World War II are also valuable. The U.S. Navy refused to listen to the British, and refused to convoy coastal and Caribbean merchant shipping. The results were disastrous. After convoy was instituted, the German U-boats were forced to operate elsewhere and change their tactics. The value of airpower as a force protection asset was an adjunct lesson learned. Airpower and convoy, used in conjunction with other ASW operations, won the battle of the Atlantic.

How do these lessons apply to today's operational commander? It is obvious that the United States is heavily dependent of sealift for any conceivable medium or large scale contingency where land prepositioned supplies are not available. The Department of Defense and Congress have recognized this dependency and tried to solve the problem with increased numbers of afloat prepositioned and LSMR ships. Herein lies the dilemma, this shipping gives the United States great flexibility but it is also a critical

vulnerability.

A determined and capable enemy with submarines, an air force, or special operations forces could seriously hamper efforts to supply a force dependent on afloat prepositioned supplies. If afloat prepositioned ships were sunk or disabled in a coordinated surprise attack, the United States forces could, conceivably, be unable to conduct offensive operations, or worse yet, not have sufficient war fighting supplies to defend an established position.

Additionally, a capable submarine or air force could interdict SLOCs, effectively eliminating or slowing shipment of supplies, or just as importantly, deterring foreign flag ships from contracting with the U.S. to carry supplies.

I believe the United States Navy and the operational commander should specifically pay heed to the following lessons learned:

1. Surprise—Japan, Great Britain and the United States were all victims of surprise when their maritime shipping was attacked. This critical vulnerability proved fatal to the Japanese war effort and Great Britain almost lost the battle for the Atlantic. Since the U.S. currently has no credible maritime threat, it is easy to ignore the maritime force protection issue. The United States could again be a victim of surprise. Slow moving, unprotected maritime prepositioned ships are a high value, low risk target for a potential enemy.

2. The U.S. Navy could easily fall into the trap that Japan and Great Britain fell into. That is, the perception that offensive operations may be the most effective way to counter a threat. The lessons learned clearly infer that all forms of offensive and defensive power must be coordinated and focused on the threat.

3. Unity of Effort/Unity of Command—Japan did not have the unity of effort or unity of command they needed to protect their merchant shipping until it was too late. United States joint doctrine directs each geographic CINC to protect shipping in his respective area of operations (AOR). Transit between different AORs could pose serious coordination problems to the Naval Component Commanders in respective AORs.

4. The United States has not had a credible threat to maritime shipping, nor practiced large-scale force protection since World War II. Consequently, even though doctrine exists, history suggests that U.S. military forces largely ignore existing doctrine and relearn the lessons with each conflict.

COUNTER-ARGUMENTS

Conversely, one could argue that the United States has operated in a low or no threat environment since the end of World War II, and that no credible threat currently exists or is likely to emerge in the next 20 years. Because of this low threat environment, maritime shipping is relatively safe and the U.S. doesn't need to exercise force protection doctrine or apply resources to combat a non-existent threat.

Another argument can be made that the size of the U.S. Navy precludes training to, or actually applying resources to protect maritime shipping. When the cold war ended and the services downsized, the U.S. Navy reduced its surface, subsurface and airborne ASW forces. ASW aircraft (P3-C and S-3) numbers have decreased by approximately 50 percent since 1989. The remaining P3-C and S-3 squadrons have been tasked with additional missions and no longer focus on ASW, it is just one of many missions that crews train for. The size of the surface and subsurface navy has also decreased. The number of submarines, cruisers, destroyers and frigates available for all missions,

including force protection, has decreased by approximately 40 percent since 1989. Increased tasking of already limited resources makes force protection a very low priority.

CONCLUSIONS

The United States reliance on maritime shipping, and the flexibility and mobility that shipping provides, is a strength but also a critical vulnerability. Even though force protection doctrine exists at the joint and service level, it is non-directive in nature. The United States should develop a comprehensive policy regarding force protection for maritime shipping, especially forward based prepositioning ships. These assets are high value, and for the most part, unprotected. Failure to consider force protection could result in disastrous consequences for United States forces in the 21st century.

¹ Alan J. Levine, The Pacific War. (Westport, CT: Praeger Publishers, 1995), 84.

² George W. Baer, One Hundred Years of Seapower (Stanford, CA: Stanford University Press 1994), 235.

³ Paul Kemp, Convoy Protection, The Defence of Seaborne Trade, (London: Arms and Armour 1993), 65.

⁴ *Ibid.*, 66.

⁵ *Ibid.*

⁶ *Ibid.*, 75.

⁷ Baer, 234.

⁸ John Winton, Convoy: The Defence of Sea Trade 1890-1990 (London: Michael Joseph Ltd. 1993), 318.

⁹ *Ibid.*

¹⁰ Mark Parillo, The Japanese Merchant Marine in World War II (Annapolis: Naval Institute Press 1993), 98.

¹¹ Kemp, 97.

¹² *Ibid.*

¹³ *Ibid.*, 99-100.

¹⁴ *Ibid.*, 18.

¹⁵ *Ibid.*, 23-25.

¹⁶ Baer, 67.

¹⁷ Paul G. Halpern, A Naval History of World War I (Annapolis: Naval Institute Press 1994) 341.

¹⁸ *Ibid.*, 342.

¹⁹ *Ibid.*, 354.

²⁰ *Ibid.*, 369.

²¹ Kemp, 115.

²² Baer, 192.

²³ *Ibid.*, 194.

²⁴ *Ibid.*, 199.

²⁵ *Ibid.*, 202.

²⁶ Richard Overy, Why the Allies Won (New York: Norton and Co.), 58.

²⁷ Robert E. Martinez, "Desert Storm and the Role of Sealift: A view from the Maritime Administration," Proceedings of the Marine Safety Council, January-February 1992. 1.

²⁸ *Ibid.*, 2.

²⁹ J.E. Rhodes and G.S. Holder, Seabased Logistics, A 21st Century Warfighting Concept, 12 May 1998, Marine Corps Combat Development Command, 3.

³⁰ Joint Chiefs of Staff, Joint Pub 4-01.2 Joint Tactics, Techniques, and Procedures for Sealift Support to Joint Operations. (Washington D.C.: 9 Oct 1996), VI-10.

³¹ Department of the Navy, Chief of Naval Operations, Naval Control and Protection of Shipping, Naval Warfare Publication 3-07.12. (Norfolk: Naval Doctrine Command, October 1996).

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